LICHEN FLORA OF LINCOLNSHIRE

M. R. D. SEAWARD

Lincolnshire Natural History Brochure No. 8

Published by
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COVER ILLUSTRATION:

Cetraria islandica (L.) Ach. "Iceland Moss" - a rarity in lowland England. Drawing (1½ x natural size) made from material collected by the author from Linwood Warren, North Lincolnshire - August 1962 (Herb. M.R.D. Seaward).

LINCOLNSHIRE NATURAL HISTORY BROCHURE

No. 8

LICHEN FLORA
OF
LINCOLNSHIRE

by

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INTRODUCTION

In the first half of this century lichenology in Lincolnshire lived up to its reputation of being the neglected branch of botany. Published records before 1906 appear mainly in *The Naturalist* and those after 1960 in *The Lichenologist* and the *Transactions of the Lincolnshire Naturalists' Union.*

The first published lichen records for Lincolnshire appear in the natural history section (p.cxcix) of Nichols (1795) which was prepared by the Rev. G. Crabbe (b.1754 - d.1832): *Lichen hirtus,* most probably *Usnea subfloridana,* is recorded as "in a plantation by the side of the Devon at Woolsthorpe"; and other taxa recorded "about Belvoir" cannot be localised with certainty on the Lincolnshire side of the boundary. This list is repeated, with minor alterations, in Eller (1841, pp.402-403). An early record of *Cladonia rangiferina,* but certainly not this species (see p.16), from the Isle of Axholme appear in Peck (1815, p.43). An early list of lichens from Crosby Warren, 1854, attributable to the Rev. W. Fowler (b.1835 - d.1912), appears in Sheppard (1910).

Dr. F. A. Lees (b.1847 - d.1921), who had a practice in the Market Rasen area from 1877 to 1879, made the only serious attempt to list the county's lichens, and published his records in White's *Directory of Lincolnshire* (1892). Several of these records are doubtful in the light of modern taxonomic interpretation, and many are unlocalised, but nevertheless provide a useful foundation for present-day reasearch. His discovery of *Cetraria islandica* on a lowland heath at Linwood Warren (Lees, 1878) was particularly important; it still grows there, occupying an area of no more than 165m^2 (Seaward, 1978). Further details of Lees' observations and unpublished records are to be found in his meticulously kept notebooks. The Lincolnshire material to be found in his extensive herbarium, housed at the Cartwright Hall, Bradford, is very limited (Seaward, 1968b). Further biographical and bibliographical information on Lees is to be found in the new introduction to the reprint of his *Flora of West Yorkshire* (Seaward, 1978c).

Several contributions to the county's lichen flora are to be found in the Goole Scientific Society's Records (1875-1886) and the Alford Natural History Society's Records (1889-1891). The manuscripts of Miss S. C. Stow (d.1956) and the manuscripts and herbarium material of H. Fisher (b.1860 - d.1935) give a good indication of the once rich lichen flora of the Grantham area at the beginning of this century. An interesting observation by Anderson (1903, p.18) from a garden near Gainsborough shows the availability of lichens for constructing birds' nests at the turn of this century; the epiphytic lichen flora has sadly declined since that period.

The Lincolnshire bryologist, G. H. Allison (b.1862 - d.1956), made a limited collection of lichens about 1930; none of his records were published, and his material is now in the author's herbarium. Watson's *Census Catalogue of British Lichens* (1953) contains records for vice-counties 53 and 54 (only five and ten records respectively), but either their origin is based on Lees' work or the details are unknown.

As can be seen, the county as a whole received limited attention from lichenologists prior to 1960; since that date a constant flow of records from several field workers (see p.7), backed up by three field meetings of the British Lichen Society (Seaward, 1963, 1968, 1978), have redressed this unfortunate position. Distribution maps of the British lichens, based on 10 x 10km units of the national grid, which incorporate Lincolnshire records have been published in *The Lichenologist* since 1967 and in a variety of other publications too numerous to specify here. Post-1960 records, based on these mapping units, are summarised for the county in Figure 1.

The most recent check-list of lichens for the county is provided by Seaward (1970), and additions are to be found in Seaward (1972, 1973, 1974, 1975, 1976, 1977, 1978, 1978b). A comprehensive list of publications up to 1975 is given in Hawksworth and Seaward (1977); the more important and interesting references are incorporated into the bibliography which follows the check-list (p.17).

TOPOGRAPHY AND HABITATS

Lincolnshire, as vice-counties 53 and 54, was the second largest county in the British Isles prior to the reorganisation of administrative boundaries; its population at this time was just over half a million. Due to the predominant agricultural interests of the county there has been a minimum of twentieth century architectural development, except in coastal areas where large stretches of maritime habitats, mainly dune-systems, have disappeared in the interests of holiday-makers and various commercial and industrial developers. Areas exposed to the erosive action of the tides have been reinforced by concrete walls. Only a small coastal cliff of chalk in the Humber estuary and a limited area of shingle at Gibraltar Point form any relief from the extensive systems of dunes and sand and/or mud flats. However, the county has a rich architectural heritage, with most historical periods represented by buildings and monuments which attest to the importance and relatively high population density of the past. The churches and graveyards, in particular, provide oases of both architectural and lichenological interest.

Lincolnshire remains one of the least known of the English counties; although there is perhaps some justification for the notion that the county is monotonous in topography and vegetation, it does in fact embrace a diverse flora and a variety of landscape.

The geological structure of the county consists essentially of thin sheets of alternating soft and hard rock which slope gently down from west to east. These strata form parts of the Triassic, Jurassic and Cretaceous systems. The thicker strata of soft rocks are more easily eroded to form wide bands of low ground, and the hard rocks stand out as ridges with steep westward-facing scarps. Five distinct regions can thus be delimited over much of the county; these are, from west to east: lowlands running southwards from the Isle of Axholme along the R. Trent to the Vale of Belvoir; a narrow north-south limestone upland, the Lincoln Edge (= Lincolnshire Heights or Lincoln Cliff to the north and Lincoln Heath to the south); a broad central vale of bedrock clays running south-east from the R. Ancholme valley as far as the Fens; another, wider upland of chalk, the Lincolnshire Wolds; and finally the coastal strip composed of the Glacial and post-Glacial boulder-clays, sands, gravels, etc. overlying the chalk from the R. Humber to Skegness. Although the greater part of the county is less than 30m above sea level, the hill ranges are important and often conspicuous, the escarpment of the Wolds, for example, rising to a height of 167m near Caistor. Extensive areas of Cover Sands, supporting lowland heaths, birch scrub, coniferous plantations, etc. are to be found mainly on and around the scarp slopes and valleys of both upland areas, particularly in the regions about Scunthorpe and Market Rasen. The geology and soils of the county are comprehensively covered by Swinnerton and Kent (1976) and Straw (1969) respectively.

The materials used for building reflect the underlying geology. Until the end of the nineteenth century almost every village throughout the clay vales and fenlands would have its own brick-pit, producing bricks of varying quality. In the Wolds, buildings have been constructed of brick, or of imported freestone, usually of Middle Jurassic Lincolnshire Limestone (often oolite) from the many quarries which have been opened from time to time along almost the entire length of the Lincoln Edge, but mainly in the Stamford and Ancaster areas. Brown shelly limestones (= iron ores) of Scunthorpe and Grantham areas have occasionally been used locally, as have other limestones a few km south-west of Lincoln and brown iron-bearing limestones and pebbly sandstones in the Wragby and Horncastle areas. Spilsby Sandstone has been employed locally for the older churches of east Lincolnshire. However, elsewhere, imported sandstones have been occasionally incorporated into buildings and more widely used for monuments and gravestones.

The relatively low relief of the county is reflected in a corresponding uniformity of climate. More than half of Lincolnshire has a mean annual rainfall of 585-635mm, but a range of about 735-760mm in the higher parts of the central Wolds to about 510-535mm in the south-eastern parts of the county is found. The most prominent surface wind directions are westerly, especially in winter, but the strength and direction varies with location and time.

More recently the frequency of westerly, rather than south-westerly, winds has increased as a general trend, and a secondary maximum of north-east winds in spring and early summer is also a significant feature. A rather narrow coastal strip east of the Wolds experiences a marked maritime effect, and sea breezes may occur on quite sunny days. In sheltered inland sites on low ground the annual average wind speed is no more than 7 knots, but at the coast the median wind is about twice as strong. Severe soil erosion by wind, especially in light soil areas, frequently occur; this problem has been exacerbated in recent years by the ploughing-up of old pastures and the removal of hedgerows.

Monthly mean air temperatures over most of the county vary from 3.0-3.5ºC in January to 16.2-16.3ºC in July. The frequency of ground frosts varies from an annual average of 70 to 80 days over much of Lincolnshire to over 100 days in concave sites. At 30cm depth, the soil temperature is warmest in late July (normally reaching a maximum of about 16.7ºC) and coldest in January-February (falling to a minimum of about 3ºC). Soil temperatures are influenced by aspect, e.g. a south-facing slope of 1 in 4 will be up to 2ºC warmer than that on a similar north-facing slope in summer (Barnes, 1975), and by soil texture, water-content, etc. Mean annual daily sunshine varies from about 4.3hr at the coast to about 4.0hr inland. During the period 1923 to 1950 the frequency of fog (i.e. visibility less than 1,000m) varied from about 15 days/annum on the coast to 40 days/annum inland (Barnes, 1975). Areas with more than 20 days/annum of fog are usually influenced by air pollution; low-level smoke is responsible in many instances for poor visibility, but background pollution (mainly as sulphur dioxide) from distant sources (mainly the industrial areas of the Midlands) depresses the visibility throughout the region. Sulphur dioxide levels, at least in the Trent valley, appear to have decreased significantly over the last decade, but insufficient data are available from rural areas due to the limited number of National Survey of Smoke and Sulphur Dioxide gauges sited there.

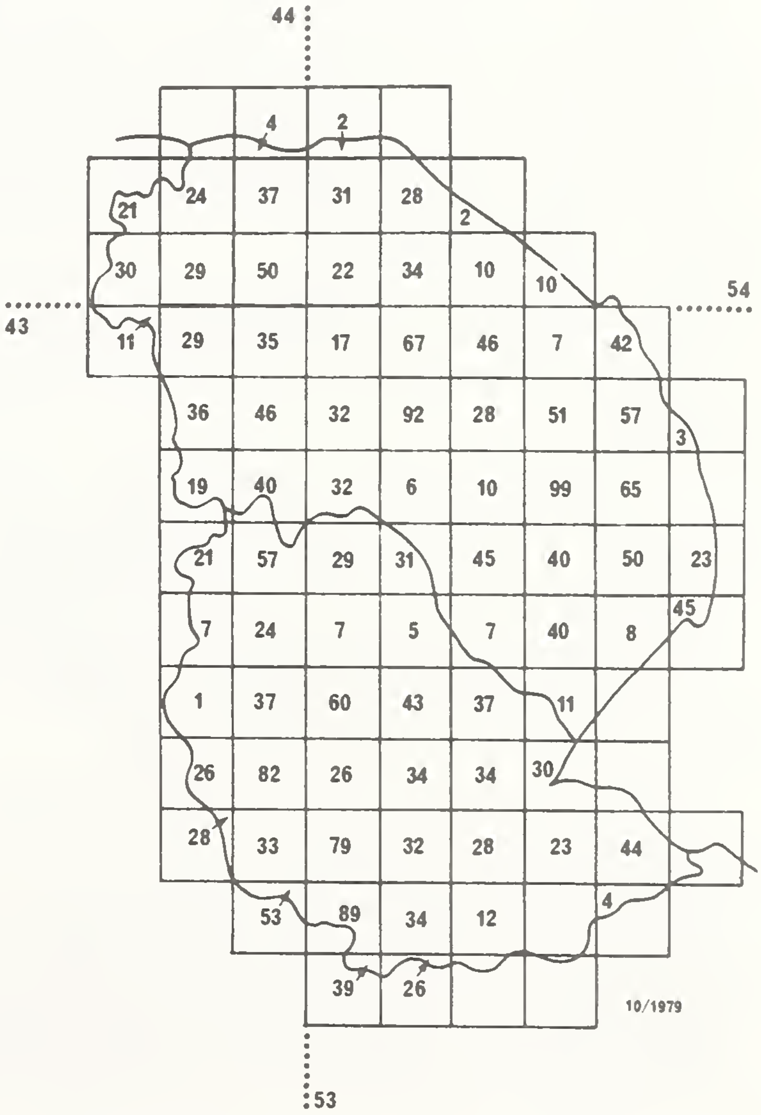


Figure 1:

Summary of post-1960 lichen recording in Lincolnshire, based on number of taxa recorded in 10 x 10km units of the national grid.

Both lowland and upland areas support lichen vegetation zones 3-4 on the Hawksworth and Rose (1970) scale, but more maritime areas to the east of the Wolds support zone 5 and parklands within valley complexes of the Wolds support zones 5-6, occasionally approaching zone 7 in the most sheltered sites. These observations suggest that much of the county has mean winter sulphur dioxide levels of about 60-125μg/m^3, but levels as low as 45μg/m^3 are to be found in the more sheltered locations.

Lincolnshire is very poorly wooded: the 1924 Forestry Census records a figure of only 2.4% woodland cover; after afforestation (mainly as coniferous plantations on the lowland heaths), the 1966 figure was still less than 3% compared with the national average of 8%. Heathlands, a major feature of the county's landscape, are to be found mainly on the Cover Sands of the commons and warrens around Gainsborough, Scunthorpe, Elsham, Caistor, Panton and Market Rasen and on the alluvial and/or glacial sands and gravels to the west of the Lincoln Edge, and in the Woodhall Spa-Kirkby Moor and Ancaster-Sleaford areas. Chalk and limestone grasslands are scarce due to extensive cultivation of the productive soils of these areas. The few remaining tracts of the above-mentioned areas would, under normal circumstances, provide suitable habitats for a rich lichen flora, but the background levels of air pollution and change in agricultural practices are contributory to a low species diversity.

HERBARIA AND MANUSCRIPT COLLECTIONS CONSULTED

BRADFORD, CARTWRIGHT MEMORIAL HALL (CMM)

Details of the limited lichen collection of F. A. Lees from Lincolnshire are to be found in Seaward (1968).

BRITISH MUSEUM (NATURAL HISTORY), LONDON (BM)

A few lichens, mainly rarities, collected by several workers including F. A. Lees and M. R. D. Seaward.

CAMBRIDGE UNIVERSITY, BOTANY SCHOOL

F. A. Lees' own annotated and interleaved copy of 'The Botany of Lincolnshire' (Lees, 1892).

COMMONWEALTH MYCOLOGICAL INSTITUTE, KEW (IMI)

A few lichens, mainly collected by D. L. Hawksworth and M. R. D. Seaward.

EDINBURGH, ROYAL BOTANIC GARDEN (E)

A few lichens, mainly collected by B. J. Coppins and M. R. D. Seaward.

GOOLE PUBLIC LIBRARY

Two volumes of the minute books of the Goole Scientific Society for the periods 5/5/1875 to 24/10/1877 and 7/11/1877 to 17/4/1886 are at present housed here, but the lichen material to support the extensive activities of this once-flourishing society is missing.

HALIFAX, BANKFIELD MUSEUM (HFX)

A few lichens collected by P. M. Earland-Bennett.

KEIGHLEY, CLIFFE CASTLE MUSEUM (KGY)

Two packets only noted in T. Hebden and A. Shackleton collections; two interesting notes in Hebden's annotated copy of J. M. Crombie's MONOGRAPH OF LICHENS FOUND IN BRITAIN (1894) for Lincolnshire lichens.

KEW, ROYAL BOTANIC GARDENS (K)

The lichen collection, which contains only a few Lincolnshire specimens, was moved to the British Museum (Natural History) in 1969 (see Brenan and Ross, 1970).

LEEDS PUBLIC LIBRARY

Notebooks and manuscript material of F. A. Lees.

LINCOLN, CITY AND COUNTY MUSEUM (LCN)

Lincolnshire Naturalists' Union lichen collection containing about 80 packets, mainly collected by W. Heath and M. R. D. Seaward.

NOTTINGHAM, WOLLATON HALL MUSEUM (NOT)

A few lichen packets made by H. Fisher from collections in the Grantham area (see Seaward, 1968).

SEAWARD, M. R. D., BRADFORD (private collection)

Approximately 620 packets of lichens, mainly collected by D. Blanchard, M. R. D. Seaward and N. Wallace, plus approximately 250 packets of material collected by J. H. Chandler from within 10-15 miles of Stamford (and therefore containing specimens from Leicestershire, Northamptonshire and Rutland as well as Lincolnshire), which were incorporated into this collection in 1977 (cf. Seaward, 1968); manuscript material of G. H. Allison, S. C. Stow and E. A. Woodruffe-Peacock.

SLEDGE, W. A., LEEDS (private collection)

Notebooks and manuscript material of F. A. Lees.

LIST OF COLLECTORS KNOWN TO HAVE WORKED IN LINCOLNSHIRE

Allison, G. H. (1862-1956)
Ashby, R. T.
Bates, S. S.
Blanchard, D.
Brightman, F. H.
Chandler, J. H.
Chapman, G. A.
Clifton, E. H.
Coppins, B. J.
Crabbe, G. (1754-1832)
Davy, J. B. (1870-1940)
Earland-Bennett, P. M.
Fisher, H. (1860-1935)
Fowler, W. (1835-1912)
Gibbons, E. J.
Gilbert, J. L.
Gilbert, O. L.
Hawksworth, D. L.
Heath, W.
Henderson, A.
Holland, G. N.
Houghton, H. J.
Johnson, M.
Jukes, C.
Kirk, F. L.
Lambley, P. W.
Langford, T. E. L.
Laundon, J. R.
Lees, F. A. (1847-1913)
Mason, W. W. (1853-1932)
Ostler, J.
Parsons, H. F. (1846-1913)
Pearson, M. C. (1924-1979)
Peck, W. (dates unknown, fl. 1815)
Peterken, J. H. G. (1893-1973)
Redshaw, E. J.
Reeves, J. (dates unknown, fl. 1904)
Riches, W. (dates unknown, fl. 1891)
Robinson, F. M. (dates unknown, fl. 1908-1921)
Rogers, J. A.
Seaward, M. R. D.
Smith, A. (1869-1947)
Soppitt, H. T. (1858-1899)
Spurrier, O. V.
Stow, S. C. (?1870-1956)
Stow, T. (d. 1929)
Wade, A. E.
Walker, C.
Wallace, E. C.
Wallace, N. (1907-1972)
Weston, I.
Woodruffe-Peacock, E. A. (1858-1922)

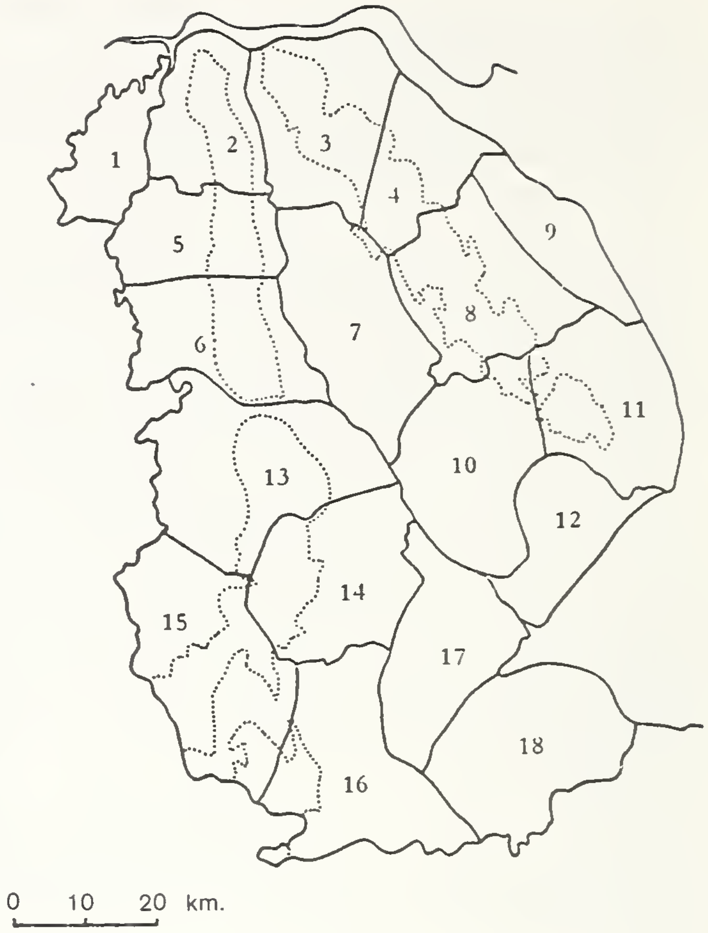
ARRANGEMENT OF THE CHECK-LIST

The nomenclature is mainly according to James (1965, 1966, 1971), Poelt (1969) and Poelt and Vezda (1977). A first record (recorder and year), divisional distribution as delimited in Figure 2 (see Jukes-Brown and Woodruffe-Peacock, 1895; Seaward, 1964, 1969a), and ecological status in the county are given. Divisional records in parentheses are for extinctions. BLS and LNU = British Lichen Society and Lincolnshire Naturalists' Union field meetings respectively (names of specific collectors in most cases unknown).

Figure 2:

Natural history divisions of Lincolnshire (after Jukes-Brown and Woodruffe-Peacock, 1895).

Vice-counties 54 and 53 are composed of divisions 1 – 12 and 13 – 18 respectively. Dotted outlines to the west enclose areas with limestone soils associated with the Lincolnshire Heights, and dotted outlines to the east enclose areas with chalky soils associated with the Lincolnshire Wolds.



ACAROSPORA FUSCATA (Nyl.) Arnold Wallace, 1970. 5,6,8-11,13,14,17,18. Locally frequent, on acid stonework (mainly in graveyards).

A. VERONENSIS Massal. Wallace, 1970. 7,11. Uncommon, on church stonework; nitrophilous.

ACROCORDIA SALWEYI (Leight. ex Nyl.) A. L. Sm. BLS, 1977. 7. Rare, on calcareous stonework.

ALECTORIA FUSCESCENS Gyeln. see BRYORIA FUSCESCENS.

ANAPTYCHIA CILIARIS (L.) Körb. Stow, 1898. 11,(13),(14),15. Rare, on siliceous churchyard memorial and single FRAXINUS.

ARTHONIA RADIATA (Pers.) Ach. BLS, 1977. 8. Rare, on single FAGUS.

A. SPADICEA Leight. Seaward & Brightman, 1976. 8,15. Uncommon, on ACER and ULMUS.

ARTHOPYRENIA SALWEYI (Leight. ex Nyl.) Zahlbr. see ACROCORDIA SALWEYI.

BACIDIA ARCEUTINA (Ach.) Arnold BLS, 1977. 8. Rare, on single FAGUS.

B. CHLOROCOCCA (Stenh.) Lett. Seaward, 1963. 2,7,11,16. Occasional, on SALIX, SAMBUCUS, and old CALLUNA and ULEX.

B. LIGNARIA (Ach.) Lett. see MICAREA LIGNARIA.

B. MELAENA (Nyl.) Zahlbr. see MICAREA MELAENA.

B. NAEGELII (Hepp) Zahlbr. Seaward, 1969. 10. Rare, on single SAMBUCUS.

B. NITSCHKEANA (Lahm ex Rabenh.) Zahlbr. see MICAREA NITSCHKEANA.

B. SABULETORUM (Schreb.) Lett. Blanchard, 1971. 7,10,11,15,16. Occasional, on mosses over limestone walls and soils, and on bark and woodwork.

B. UMBRINA (Ach.) Bausch. Seaward, 1972. 6,8,13,15. Occasional, on stonework; overlooked.

B. VEZDAE Coppins & P. James. Seaward, 1963. 10. Rare, on single QUERCUS.

BAEOMYCES RUFUS (Huds.) Rabent. Lees, 1892. (LOC.NON CIT. in N. Lincs.), 15. Rare, on sand and gravel.

BRYORIA FUSCESCENS (Gyeln.) Brodo & D. Hawksw. BLS, 1962. 7. Rare, on single QUERCUS; probably extinct.

BUELLIA ALBOATRA (Hoffm.) Deichm. Br. & Rostr. BLS, 1962. 6-8, 10, 11, 15, 18. Occasional, on limestone and various deciduous trees (mainly ULMUS).

B. CANESCENS (Dicks.) DNot. Goole Sci. Soc., 1877. 1-11,13-18. Frequent, on limestone and hypertrophicated bark.

B. GRISEOVIRENS (Sm.) Almb. BLS, 1977. 7. Rare, on single FRAXINUS.

B. PUNCTATA (Hoffm.) Massal. BLS, 1962. 2,3,6-11,14-17. Frequent, on hypertrophicated bark (mainly ACER and ULMUS); rare on leather.

CALICIUM GLAUCELLUM Ach. BLS, 1977. 7. Rare, on QUERCUS log.

C. VIRIDE Pers. Lees, 1892. 7,8,10,15. Occasional, in dry crevices of ACER, QUERCUS and ULMUS bark.

CALOPLACA AURANTIA (Pers.) Hellb. BLS, 1962. 1,2,5-7,9-11,13-18. Frequent, on limestone churches and memorials

C. AURANTIACA (Lightf.) Th. Fr. see C. FLAVOVIRESCENS.

C. CERINA (Ehrh. ex Hedw.) Th. Fr. Wade, 1970. 11. Rare, on single FRAXINUS.

C. CITRINA (Hoffm.) Th. Fr. (incl. var. FLAVOCITRINA (Nyl.) Wade) Seaward, 1963. 1-18. Common, on wide variety of calcareous substrates; rare on corticolous and lignicolous substrates.

C. DECIPIENS (Arnold) Jatta Chandler, 1965. 2,3,6,7,9-11,13-17. Occasional, on calcareous stonework (mainly churchyard memorials).

C. FLAVOVIRESCENS (Wulf.) D. T. & Sarnth. Seaward, 1970. 8,11,14. Occasional, on calcareous stonework.

C. HEPPIANA (Müll. Arg.) Zahlbr. BLS, 1962. 1-3,5-18. Common, on calcareous substrates.

C. HOLOCARPA (Hoffm.) Wade. BLS, 1962. 1,5-7,9-11,13-18. Frequent, on calcareous substrates.

C. LACTEA (Massal.) Zahlbr. Seaward, 1975. 2. Rare, on oolite limestone wall.

C. MURORUM (Ach.) Th. Fr. see C. SAXICOLA.

C. SAXICOLA (Hoffm.) Nordin. Lees, 1877. 5-7,9-11,13-17. Locally frequent, on limestone.

C. TEICHOLYTA (Ach.) Steiner BLS, 1962. 5,7,9-11,14-18. Locally frequent, on limestone; fertile at one site only.

CANDELARIELLA AURELLA (Hoffm.) Zahlbr. BLS, 1965. 1-4,6-18. Common, on calcareous substrates.

C. MEDIANS (Nyl.) A. L. Sm. BLS, 1962. 2,3,5-11,13-18. Locally frequent, on limestone, mortar and asbestos-cement.

C. REFLEXA (Nyl.) Lett. Seaward, 1974. 10,15. Uncommon, on hypertrophicated FRAXINUS.

C. VITELLINA (Hoffm.) Müll. Arg. BLS, 1962. 2-11,13-18. Common, on non-calcareous substrates; rare on FRAXINUS.

C. XANTHOSTIGMA (Ach.) Lett. Seaward, 1971. 8,15. Uncommon, on hypertrophicated FRAXINUS and ULMUS.

CATILLARIA CHALYBEIA (Borr.) Massal. Earland-Bennett, 1974. 15. Rare, on oolite limestone.

C. GRIFFITHII (Sm.) Malme BLS, 1962. 7-11,15,16. Occasional, on bark (mainly ULMUS), especially about base of trunk.

C. PRASINA (Fr.) Th. Fr. see MICAREA PRASINA.

CETRARIA CHLOROPHYLLA (Willd.) Vain. BLS, 1962. 7,10,15. Occasional, on QUERCUS; rare on decorticate QUERCUS fencing.

C. GLAUCA (L.) Ach. see PLATISMATIA GLAUCA.

C. ISLANDICA (L.) Ach. Lees, 1877. 7. Rare, on lowland acid heath; details of status given in Seaward (1978).

CHAENOTHECA FERRUGINEA (Turn. ex Sm.) Mig. BLS, 1962. 7,8,10,11,15,16. Occasional, in dry crevices of bark.

C. TRICHIALIS (Ach.) Th. Fr. BLS, 1977. 8. Rare, on single FRAXINUS.

CLADONIA ARBUSCULA (Wallr.) Rabenh. Lees, 1877. 2,3,5,7,(9),10. Locally frequent, on lowland acid heaths.

C. BACILLARIS auct. non Nyl. Seaward, 1959. 2,5,7,10. Occasional, on lowland acid heaths.

C. CHLOROPHAEA (Flörke ex Sommerf.) Spreng. Lees, 1892. 1-3,5-11,13,15,16. Frequent, on heathland, tree stumps and mossy walls; rare on leather.

C. CILIATA Stirt. Lees, 1878. 2,7,10,11. Occasional, on lowland acid heaths and sand-dunes.

C. COCCIFERA (L.) Willd. Fowler, 1854. 1,2,7,10. Locally frequent, on lowland acid heaths.

C. CONIOCRAEA auct. non (Flörke) Spreng. Laundon, 1954. 1-8,10-16. Common, on bark (usually around tree bases).

C. CONISTA auct. europ. non (Ach.) Robb. ex Allen (incl. C. CONISTEA auct. non (Del.) Asah.) Seaward, 1961. 1,2,6,7,9,14-16. Occasional, on dry and mossy neutral soils.

C. CRISPATA (Ach.) Flot. var. CETRARIIFORMIS (Del. ex Duby) Vain. BLS, 1977. 7. Rare, on lowland acid heath.

C. DIGITATA (L.) Hoffm. BLS, 1962. 6,7. Occasional, on logs, tree stumps and peat.

C. FIMBRIATA (L.) Fr. Lees, 1892. 1-3,5-16. Frequent, on calcareous and non-calcareous stonework, acid soils (including sand-dunes) and old wood.

C. FLOERKEANA (Fr.) Sommerf. Fowler, 1878. 1,2,5,7,10. Locally frequent, on lowland acid heaths.

C. FOLIACEA (Huds.) Willd. Seaward, 1962. 2,10. Uncommon, on three lowland acid heaths.

C. FURCATA (Huds.) Schrad. subsp. FURCATA. Lees, 1877. 2,5,7,9,10,11,15,16. Locally frequent, on acid soils.

subsp. SUBRANGIFORMIS (Nyl.) Pisut BLS, 1965. 15. Rare, in limestone grassland; probably extinct.

C. GLAUCA Flörke BLS, 1962. 5,7. Uncommon, on lowland acid heaths.

C. GRACILIS (L.) Willd. Riches, 1891. 5,7,(11),(15). Uncommon, on peaty soils.

C. IMPEXA Harm. see C. PORTENTOSA.

C. MACILENTA Hoffm. Lees, 1892. 1,2,5,7,8,10-13. Locally frequent, on peaty soils and old (often decaying) wood.

C. OCHROCHLORA Flörke Heath, 1963. 7,12,13,15. Occasional, on tree stumps and decaying wood.

C. PITYREA (Flörke) Fr. Seaward, 1965. 15. Rare, on peaty soil; overlooked.

C. POCILLUM (Ach.) O. J. Rich. BLS, 1965. 9,11,15,18. Locally frequent on dunes, occasional on mossy limestone.

C. POLYDACTYLA (Flörke) Spreng. BLS, 1962. 2,7,10,13,15,16. Occasional, on peat and decaying wood.

C. PORTENTOSA (Duf.) Zahlbr. Lees, 1878. 2,5,7,10,11. Locally frequent, on lowland acid heaths; rare on sand-dunes.

C. PYXIDATA (L.) Hoffm. Fowler, 1854. 2,5,(7),(9),10,(11),(13),14-16. Occasional, on dry neutral and acid soils; some older records (given in brackets) should be referred to C. CHLOROPHAEA.

C. RANGIFORMIS Hoffm. Lees, 1892. 2,5,9-11,15,16. Locally frequent, on sand-dunes and heaths; uncommon in limestone grassland.

C. SCABRIUSCULA (Del. ex Duby) Leight. Spurrier, 1961. 1,2,10. Occasional, on peaty soils.

C. SQUAMOSA (Scop.) Hoffm. var. SQUAMOSA. Fisher, 1901. 1,2,5,7,13,15. Locally frequent, on peaty soils.

var. SUBSQUAMOSA (Nyl. ex Leight.) Vain. Holland, 1965. 7. Rare, on peaty soil.

C. SUBRANGIFORMIS Sandst. see C. FURCATA subsp. SUBRANGIFORMIS.

C. SUBSQUAMOSA (Nyl.) Nyl. ex Cromb. see C. SQUAMOSA var. SUBSQUAMOSA.

C. SUBULATA (L.) Web. BLS, 1965. 16. Rare, on neutral soil; overlooked.

C. TENUIS (Flörke) Harm. see C. CILIATA.

C. UNCIALIS (L.) Web. Fowler, 1895. 2,5,7,10. Occasional, on lowland acid heaths.

COLLEMA AURICULATUM Hoffm. Blanchard, 1970. 7,13,16. Occasional, on limestone.

C. BACHMANNIANUM (Fink) Degel. Blanchard, 1970. 15. Rare, on gravel quarry spoil heap.

C. CRISPUM (Huds.) Web. Fisher, 1912. 3,5,7,11,15,16. Occasional, on limestone.

C. CRISTATUM (L.) Web. Parson, 1879. (2),(15). No recent records.

C. LIMOSUM (Ach.) Ach. LNU, 1898. (15). No recent records.

C. TENAX (Sw.) Ach. BLS, 1965. 9,11,16. Occasional, on limestone, chalk and concrete.

CORNICULARIA ACULEATA (Schreb.) Ach. Lees, 1877. 2,5,7,9,10. Locally frequent, on lowland acid heaths and mature sand-dunes.

CYPHELIUM INQUINANS (Sm.) Trevis. Chandler, 1964. 15,16. Uncommon, on horizontal rails of wooden fences.

DIMERELLA DILUTA (Pers.) Trevis. Blanchard, 1970. 16. Rare, on single ULMUS.

DIPLOSCHISTES BRYOPHILUS (Ehrh.) Zahlbr. BLS, 1977. 9. Locally frequent on mature sand-dunes.

D. SCRUPOSUS (Schreb.) Norm. Lees, 1892. (LOC. NON CIT. in N. Lincs.) 10,(15). Occasional on mossy stonework.

DIRINA STENHAMMARI (Fr.) Poelt & Follm. Lambley, 1974. 7-11,13-18. Occasional, on limestone (mainly dry church walls).

EVERNIA PRUNASTRI (L.) Ach. Goole Sci. Soc., 1877. (2),(4),7,8,(10),11,(13),14-16. Occasional on trunks of various deciduous trees, uncommon on branches.

GRAPHIS SCRIPTA (L.) Ach. Lees, 1892. (LOC. NON CIT. in N. & S. Lincs.), (15). No recent records.

HAEMATOMMA COCCINEUM (Dicks.) Körb. see H. OCHROLEUCUM.

H. OCHROLEUCUM (Neck.) Laund. var. OCHROLEUCUM. Lambley, 1974. 10,11,14,16. Occasional, on church walls and vertical tombstones.

var. PORPHYRIUM (Pers.) Laund. Wallace, 1970. 10,11. Occasional, on church walls and vertical tombstones; rare on single ULMUS.

HYPOGYMNIA PHYSODES (L.) W. Watson. Lees, 1877. 1,(2),3,(4),5,7-11,13-16. Locally frequent, on various deciduous trees and shrubs.

H. TUBULOSA (Schaer.) Hav. BLS, 1962. 7,10,14,15. Occasional, on deciduous trees; rare on sand.

LECANACTIS ABIETINA (Ach.) Körb. BLS, 1962. 7,15. Rare, on QUERCUS.

LECANIA CYRTELLA (Ach.) Th. Fr. Johnson, 1970. 8,10,11. Uncommon, on FRAXINUS.

L. ERYSIBE (Ach.) Mudd Coppins, 1970. 1,6,7,9-11,13,15,18. Occasional, on calcareous substrates; overlooked.

LECANORA ATRA (Huds.) Ach. Seaward, 1961. 3,5-11,13-18. Occasional, on non-calcareous substrates.

L. CALCAREA (L.) Sommerf. BLS, 1962. 1-3,5-7,11,13-18. Locally frequent, on calcareous substrates (mainly limestone).

L. CAMPESTRIS (Schaer.) Hue BLS, 1962. 1-3,5-11,13-18. Common on limestone, mortar and asbestos-cement.

L. CARPINEA (L.) Vain. BLS, 1977. 8. Rare, on single FAGUS.

L. CHLARONA auct. non (Ach.) Nyl. see L. PULICARIS.

L. CHLAROTERA Nyl. Goole Sci. Soc., 1877. (2),7,9-11,15,17. Occasional, on trunks of various deciduous trees.

L. CONIZAEOIDES Nyl. ex Cromb. Laundon, 1954. 1-18. Abundant, on corticolous, lignicolous and saxicolous substrates.

L. CONTORTA (Hoffm.) Steiner Seaward, 1973. 6,7,15. Uncommon, on limestone.

L. CRENULATA (Dicks.) Hook. BLS, 1962. 6-11,15,16,18. Occasional, on limestone and mortar.

L. DISPERSA (Pers.) Sommerf. (incl. L. ALBESCENS (Hoffm.) Flörke) Lees, 1892. 1-18.

Abundant, on calcareous substrates; uncommon on corticolous (mainly FRAXINUS and ULMUS) and lignicolous substrates; rare on leather.

L. EXPALLENS Ach. BLS, 1962. 6-11,14-18. Locally frequent, on various deciduous trees and shrubs.

L. INTRICATA (Ach.) Ach. BLS, 1977. 11. Rare, on single chest-tomb.

L. MURALIS (Schreb.) Rabenh. Lees, 1892. 1-3,5-18. Frequent, on concrete and asbestos-cement.

L. POLYTROPA (Hoffm.) Rabenh. Lambley, 1974. 2,5-8,10,11,13-15,17,18. Occasional on siliceous stonework (mainly in graveyards); rare on ironwork.

L. PULICARIS (Pers.) Ach. BLS, 1977. 7. Rare, on single BETULA.

L. SORALIFERA (Suza) Räs. BLS, 1962. 3,6,7,10,11,13,15,17,18. Occasional, on non-calcareous stonework (mainly tomb headstones); rare on ironwork.

L. SUBCIRCINATA Nyl. Parsons, 1879. (2). No recent records.

L. VARIA (Hoffm.) Ach. BLS, 1977. 10. Rare, on horizontal rail to wooden fence.

LECIDEA COARCTATA (Sm.) Nyl. var. COARCTATA see TRAPELIA COARCTATA.
var. ORNATA (Sommerf.) Nyl. see TRAPELIA INVOLUTA.

L. CRUSTULATA (Ach.) Spreng. Chandler & Seaward, 1969. 2,3,6,15. Occasional, on pebbles and acid stonework.

L. FUSCOATRA (L.) Ach. var. GRISELLA (Flörke ex Schaer.) Nyl. BLS, 1977. 11. Rare, on single chest-tomb.

L. GRANULOSA (Hoffm.) Ach. BLS, 1962. 1-3,5,7,8,10,11,13,15,16. Locally frequent, on peat and old tree stumps.

L. LIMITATA (Scop.) Gray see LECIDELLA ELAEOCHROMA.

L. LUCIDA (Ach.) Ach. BLS, 1962. 1-3,5-18. Frequent, on vertical acid stonework and bricks.

L. MACROCARPA (DC.) Steud. BLS, 1962. 5,7,16. Occasional, on fine-grained acid stonework and pebbles.

L. QUERNEA (Dicks.) Ach. Lees, 1892. (LOC. NON CIT. in N. Lincs.), 7,9,11. Occasional, on FRAXINUS, TILIA and ULMUS.

L. SCABRA Tayl. see LECIDELLA SCABRA.

L. SCALARIS (Ach.) Ach. BLS, 1962. 1,7,8,10,11,14-16. Occasional, on various deciduous trees; uncommon on vertical acid stonework and bricks.

L. STIGMATEA Ach. see LECIDELLA STIGMATEA.

L. SULPHUREA (Hoffm.) Wahlenb. BLS, 1977. 9,10. Uncommon, on non-calcareous church walls.

L. TUMIDA Massal. BLS, 1962. 3,6-11,13,15,17,18. Occasional, on siliceous stonework.

L. ULIGINOSA (Schrad.) Ach. BLS, 1962. 1,2,5-7,10,11,16. Locally frequent, on peat; occasional on wood.

LECIDELLA ELAEOCHROMA (Ach.) Choisy Goole Sci. Soc., 1877. (2),10,15. Uncommon, on ACER and FRAXINUS.

L. SCABRA (Tayl.) Hert. & Leuck. Earland-Bennett, 1974. 2,5,6,9,11,13-15,17. Occasional on fine-grained acid stonework; rare on FRAXINUS and leather.

L. STIGMATEA (Ach.) Hert. & Leuck. Chandler, 1965. 1,5-11,13-18. Common, on limestone, concrete and asbestos-cement.

LEPRARIA CANDELARIS (L.) Fr. BLS, 1962. 7,8,15. Uncommon, in dry crevices of mature FAGUS, FRAXINUS and QUERCUS.

L. INCANA (L.) Ach. Seaward, 1961. 1-18. Very common, on shaded bark and mossy walls; occasional on brickwork.

LEPTOGIUM SCHRADERI (Ach.) Nyl. Blanchard, 1971. 16. Rare, on mortar.

LICHINA CONFINIS (O.F. Müll.) C. Arg. Johnson, 1971. 9. Rare, on concrete coastal war defences.

LOBARIA PULMONARIA (L.) Hoffm. Lees, 1892. (LOC. NON CIT. in N. Lincs.). Extinct.

MICAREA DENIGRATA (Fr.) Hedl. BLS, 1977. 7. Rare, on old decorticate branch (?QUERCUS).

M. LIGNARIA (Ach.) Hedl. BLS, 1977. 7. Rare, on mossy acid stonework.

M. MELAENA (Nyl.) Hedl. BLS, 1977. 7. Rare, on decorticate tree stump (?QUERCUS).

M. NITSCHKEANA (Lahm ex Rabenh.) Harm. Seaward, 1975. 2,9. Uncommon, on SAMBUCUS and old ULEX.

M. PRASINA Fr. Seaward, 1973. 5,7,15,17. Occasional, on various trees and shrubs (including old ULEX and CALLUNA); overlooked.

OCHROLECHIA ANDROGYNA (Hoffm.) Arnold. BLS, 1977. 7. Rare, on QUERCUS.

O. PARELLA (L.) Massal. BLS, 1977. 11. Rare, on single siliceous tomb slab.

O. SUBVIRIDIS (Høeg) Erichs. Seaward, 1962. 7. Rare, on single QUERCUS.

O. TURNERI (Sm.) Hasselr. Seaward, 1970. 7,8,11,14-16. Occasional, on ACER, FRAXINUS and ULMUS.

O. YASUDAE auct. angl. non Vain. see O. SUBVIRIDIS.

OPEGRAPHA ATRA Pers. BLS, 1977. 10. Uncommon, on ACER and JUGLANS.

O. CHEVALLIERI Leight. BLS, 1977. 9,18. Uncommon, on church walls near sea.

O. SAXATILIS DC. Brightman & Seaward, 1976. 11. Rare, on calcareous church wall.

O. VARIA Pers. BLS, 1977. 10. Rare, on single FRAXINUS.

O. VERMICELLIFERA (Kunze) Laund. BLS, 1977. 8. Rare, on single FAGUS.

PARMELIA ACETABULUM (Neck.) Duby Wallace, 1969. 11. Rare, on single ACER.

P. ASPERA Massal. see P. EXASPERATA.

P. CAPERATA (L.) Ach. Lees, 1877. (2),7,8,(11), (LOC. NON CIT. in S. Lincs.). Uncommon, on FRAXINUS, QUERCUS and SALIX.

P. EXASPERATA (Ach.) DNot. Lees, 1892. (LOC. NON CIT.) Extinct.

P. EXASPERATULA Nyl. Seaward, 1974, 15. Rare, on single FRAXINUS.

P. FURFURACEA (L.) Ach. see PSEUDEVERNIA FURFURACEA.

P. GLABRATULA (Lamy) Nyl. subsp. GLABRATULA. Seaward, 1963. 3,7-11,15,16. Occasional, on various deciduous trees and shrubs.

subsp. FULIGINOSA (Fr. ex Duby) Laund. Wallace, 1970. 3,8-11. Occasional, on siliceous gravestones.

P. PERLATA (Huds.) Ach. Lees, 1892. (LOC. NON CIT. in N. Lincs.). Extinct?

P. PHYSODES (L.) Ach. see HYPOGYMNIA PHYSODES.

P. REVOLUTA Flörke. BLS, 1977. 8. Rare, on single FRAXINUS.

P. SAXATILIS (L.) Ach. Goole Sci. Soc., 1977. (2),3,6-8,11,13-16. Occasional, on siliceous gravestones; rare on tree trunks.

P. SUBAURIFERA Nyl. BLS, 1962. 7-11, 14-16. Locally frequent, on various deciduous trees and shrubs; rare on stonework.

P. SUBRUDECTA Nyl. Laundon, 1954. 7-11,14-17. Locally frequent, on various deciduous trees and shrubs.

P. SULCATA Tayl. Lees, 1878. 3,4,7-17. Frequent, on various deciduous trees and shrubs; rare on acid stonework.

P. TUBULOSA (Schaer.) Bitt. see HYPOGYMNIA TUBULOSA.

PARMELIOPSIS AMBIGUA (Wulf.) Nyl. BLS, 1962. 7,15,16. Uncommon, on QUERCUS bark; rare on QUERCUS fencing.

PELTIGERA CANINA (L.) Willd. Fowler, 1854. 2,3,5,(7),(9),10-12.(13),(14),(15),16. Locally frequent, on heath and sand-dunes, and in grassland; some older records (given in brackets) should be referred to other PELTIGERA spp.

P. HYMENINA (Ach.) Del. Fisher, 1899. 2,3,(10),11,15. Occasional, in short grass (especially woodland rides) on acid soils and clays.

P. NECKERI Müll. Arg. Wallace, 1969. 11. Rare, on mature sand-dune.

P. PRAETEXTATA (Flörke ex Sommerf.) Zopf Allison, 1930. (9). No recent records.

P. RUFESCENS (Weiss) Humb. Lees, 1892. 1,2,5-7,9-11,16. Locally frequent, on heaths and sand-dunes.

P. SPURIA (Ach.) DC. Gilbert (J. L.), 1942. 2,3,5,10,11,15,16. Occasional, in grassland on acid soils and clays.

PERTUSARIA ALBESCENS (Huds.) Choisy & Wern. var. ALBESCENS. BLS, 1962. 7,8,15. Uncommon, on FRAXINUS and ULMUS.

var. CORALLINA (Zahlbr.) Laund. BLS, 1962. 3,7,8,10,11,15,16. Occasional, on trunks of various deciduous trees (mainly FRAXINUS).

P. AMARA (Ach.) Nyl. (incl. var. FLOTOWIANA (Flörke) Erichs.) Goole Sci. Soc., 1877. 2,3,6-11,13-16,18. Locally frequent, on trunks of various deciduous trees; uncommon on sandstone.

P. COCCODES (Ach.) Nyl. Johnson, 1970. 7,10,15. Uncommon, on FRAXINUS.

P. PERTUSA (L.) Tuck. Lees, 1892. 7,8,10,15,16. Occasional, on trunks of various deciduous trees.

PHLYCTIS ARGENA (Sprengel) Flot. Lees, 1892. 1-3,7-11,14-16. Occasional, on various deciduous trees; rare on sandstone church wall.

PHYSCIA ADGLUTINATA (Flörke) Nyl. see PHYSCIOPSIS ADGLUTINATA (Flörke) Poelt.

P. ADSCENDENS (Th. Fr.) H. Oliv. BLS, 1962. 1-3,5-11,13-18. Frequent, on various saxicolous substrates and hypertrophicated bark.

P. AIPOLIA (Humb.) Fürnrohr. Lees, 1892. (LOC. NON CIT.) Extinct?

P. CAESIA (Hoffm.) Fürnrohr. Seaward, 1962. 1-11,13-18. Common, on various saxicolous substrates (mainly calcareous); nitrophilous.

P. DUBIA (Hoffm.) Lett. BLS, 1965. 6,11,15,18. Occasional, on calcareous stonework.

P. ENTEROXANTHA Nyl. see PHYSCONIA ENTEROXANTHA.

P. FARREA (Ach.) Vain. see PHYSCONIA PERISIDIOSA.

P. GRISEA (Lam.) Zahlbr. see PHYSCONIA GRISEA.

P. NIGRICANS (Flörke) Stiz. Seaward, 1966. 1,8,9,11,13-16. Occasional, on concrete and asbestos-cement; probably overlooked.

P. ORBICULARIS (Neck.) Poetsch Lees, 1892. 1-11,13-18. Common, on concrete and asbestos-cement; occasional on hypertrophicated bark (mainly ULMUS).

P. PULVERULENTA auct. non (Schreb.) Hampe see PHYSCONIA PULVERULACEA.

P. TENELLA (Scop.) DC. Lees, 1892. 2-4,7-11,13-18. Frequent, on hypertrophicated bark; occasional on saxicolous substrates.

PHYSCIOPSIS ADGLUTINATA (Flörke) Choisy BLS, 1977. 8. Rare, on single FAGUS.

PHYSCONIA ENTEROXANTHA (Nyl.) Poelt Seaward & Brightman, 1976. 8,10. Uncommon, on FRAXINUS, JUGLANS and ULMUS.

P. GRISEA (Lam.) Poelt Lees, 1892. 1-3,5-11,13-18. Locally frequent, on limestone; occasional on hypertrophicated bark (mainly FRAXINUS, SALIX and ULMUS).

P. PERISIDIOSA (Erichs.) Moberg Seaward & Brightman, 1976. 10,11. Uncommon, on siliceous churchyard memorial and ULMUS.

P. PULVERULACEA Moberg Lees, 1892. (LOC. NON CIT. in N. & S. Lincs.), 11,15. Uncommon, on hypertrophicated trunks of FRAXINUS and ULMUS, and on siliceous churchyard memorial.

PLACYNTHIUM NIGRUM (Huds.) Gray BLS, 1965. 1-3,5,6,10,11,13-17. Occasional, on limestone.

PLATISMATIA GLAUCA (L.) Culb. & C. Culb. BLS, 1962. 7,15,16. Uncommon, on BETULA and QUERCUS; rare on QUERCUS fencing.

POLYBLASTIA DERMATODES Massal. BLS, 1977. 10. Rare, on limestone wall.

PROTOBLASTENIA METZLERI (Körb.) Steiner BLS, 1965. 16. Rare, on limestone.

P. MONTICOLA (Ach.) Steiner Clifton, 1965. 13-15. Occasional, on limestone.

P. RUPESTRIS (Scop.) Steiner BLS, 1965. 2,5,7,10,11,13-18. Locally frequent, on limestone and cement.

PSEUDEVERNIA FURFURACEA s.l. Lees, 1892. (LOC. NON CIT. in N. Lincs.).
var. FURFURACEA. BLS, 1977. 7. Rare, on single BETULA.

RAMALINA BALTICA Lett. BLS, 1977. 9. Rare, on church wall (greenstone).
R. CALICARIS (L.) Fr. Lees, 1877. (7). No recent records.
R. DURIAEI (DNot.) Jatta Lees, 1892. (LOC. NON CIT. in N. Lincs.), 11. Rare, on church wall (greenstone).
R. EVERNIOIDES Nyl. see R. DURIAEI.
R. FARINACEA s.l. Lees, 1892. (LOC. NON CIT. in N. Lincs.), 7-11,15,16.
var. FARINACEA. Seaward, 1963. 8-10,15,16. Occasional, on various deciduous trees and shrubs.
var. HYPOPROTOCETRARICA (Culb.) D. Hawksw. Seaward, 1963. 8-11,16. Occasional, on various deciduous trees and shrubs; less frequent than var. FARINACEA.
var. REAGENS B. de Lesd. Seaward, 1971. 8. Rare, on single FRAXINUS.
R. FASTIGIATA (Pers.) Ach. Goole Sci. Soc., 1877. (2),10,11. Uncommon, on FRAXINUS and ULMUS.
R. FRAXINEA (L.) Ach. Lees, 1877. (7),9,10,(13),(15), (LOC. NON CIT. in S. Lincs.). Uncommon, on ACER and FRAXINUS.
R. OBTUSATA auct. angl. non (Arnold) Bitt. see R. BALTICA.
RHIZOCARPON OBSCURATUM (Ach.) Massal. var. REDUCTUM (Th. Fr.) Eitner BLS, 1977. 10,11. Uncommon, on sandstone; probably overlooked.
RINODINA EXIGUA (Ach.) Gray Seaward, 1975. 7,10,11,17. Uncommon, on ACER and ULMUS; rare on wooden planks.
R. SUBEXIGUA (Nyl.) Oliv. Seaward, 1968. 1,3,5-7,9-11,13-18. Locally frequent, on calcareous substrates; uncommon on non-calcareous substrates.
R. TEICHOPHILA (Nyl.) Arnold BLS, 1965. 15,16. Uncommon, on acid and basic stonework.

SARCOGYNE REGULARIS Körb. Watson, 1953. 3,14-18. Occasional, on horizontal limestone and concrete; under-recorded.
SCHISMATOMMA DECOLORANS (Turn. & Borr. ex Sm.) Clauz. & Vezda BLS, 1965. 10,16. Uncommon, on FRAXINUS and ACER CAMPESTRE.
SOLORINA SACCATA (L.) Ach. Parsons, 1879. (2), (LOC. NON CIT. in S. Lincs.). No recent records.
STEREOCAULON PILEATUM Ach. Wallace, 1971. 10. Rare, on old tiled roof.
S. VESUVIANUM Pers. Blanchard, 1970. 10,16. Rare, on acid stonework.

TONINIA AROMATICA (Sm.) Massal. Blanchard, 1970. 9-11,15,17,18. Occasional, on mortar and limestone.
TRAPELIA COARCTATA (Sm.) Choisy BLS, 1962. 3,6,7,10,13,15,17. Occasional, on acid stonework, pebbles and bricks.
T. INVOLUTA (Tayl.) Hert. Earland-Bennett, 1974. 15. Rare, on acid stonework.

USNEA SUBFLORIDANA Stirt. BLS, 1962. 7,10,16. Uncommon, on QUERCUS and SALIX.

VERRUCARIA AETHIOBOLA Wahlenb. ex Ach. Chandler, 1965. 16. Rare, on pebble conglomerate.
V. BALDENSIS Massal. BLS, 1965. 2,3,6,13-18. Occasional, on limestone.
V. GLAUCINA Ach. Seaward, 1971. 3,5,6,10,11,14-16,18. Occasional, on limestone.
V. HOCHSTETTERI Fr. Seaward, 1963. 3,6,10,11,13-16. Occasional, on limestone and mortar.
V. MURALIS Ach. Seaward, 1963. 1-3,5-11,13-18. Common, on limestone and cement.
V. NIGRESCENS Pers. Fisher, 1912. 1-11,13-18. Common, on limestone and cement.
V. SPHINCTRINA auct. non Ach. see V. BALDENSIS.
V. VIRIDULA (Schrad.) Ach. BLS, 1965. 3,5-7,9-11,14-18. Common, on limestone and concrete.

XANTHORIA AUREOLA auct. non (Ach.) Erichs. Seaward, 1965. 1-3,5-9,11,13-17. Frequent, on limestone, concrete and asbestos-cement.

X. CANDELARIA (L.) Th. Fr. Seaward, 1961. 2,3,6-11,14-18. Locally frequent, on hypertrophicated bark and tops of wooden fence posts and stone bird perches (especially tombstones).

X. ELEGANS (Link.) Th. Fr. BLS, 1962. 7,13,15,16. Uncommon, on asbestos-cement and limestone.

X. PARIETINA (L.) Th. Fr. var. PARIETINA. Lees, 1877. 1-11,13-18. Common on hypertrophicated bark and a wide variety of saxicolous substrates (especially farm buildings); nitrophilous.

var. ECTANEA (Ach.) Kickx Seaward, 1968. 13,16. Uncommon, on limestone; forms grading into var. PARIETINA frequent.

X. POLYCARPA (Hoffm.) Oliv. Seaward, 1962. 3,9-11,15-17. Occasional, on twigs (mainly SAMBUCUS) and wooden fences.

LICHENS OMITTED FROM THE CHECK-LIST

The following taxa have been omitted from the check-list for the reasons stated:-

CALOPLACA FERRUGINEA Field record, not supported by herbarium material.

CLADONIA RANGIFERINA Error; wrongly interpreted in the 19th century - all material examined proved to be C. ARBUSCULA or C. CILIATA or C. PORTENTOSA.

COLLEMA FASCICULARE Doubtful; published record (1898), not supported by herbarium material.

LEPRARIA MEMBRANACEA Three field records, not supported by herbarium material.

PHYSCIA LEPTALEA (as P. STELLARIS var. LEPTALEA in Lees, 1892) Doubtful.

P. STELLARIS (in Lees, 1892) Error; wrongly interpreted in the 19th century.

RAMALINA POLLINARIA Doubtful; published record in Lees (1888) 'The Flora of West Yorkshire' (p.638), not supported by herbarium material.

USNEA spp. Modern interpretation of the species bears little relation to that in use in the 19th century. In the absence of herbarium material, few old records are of value; the following records exist: LICHEN HIRTUS, Crabbe (in Nichols, 1795), (15) - as USNEA PLICATA in Eller (1841); U. BARBATA vars. HIRTA and PLICATA, Lees (1892), (LOC. NON CIT. in N. Lincs.); U. BARBATA, Lees (1892), (LOC. NON CIT. in N. & S. Lincs.) and Stow, 1898, (13); U. FLORIDA, note in T. Hebden's annotated copy of J. M. Crombie's 'A Monograph of Lichens found in Britain' (1894, p.202).

SUMMARY

The Lincolnshire lichen flora can be summarised as follows: 226 taxa have been reported from the county, of which two have been proved to be erroneous and seven are doubtful in the absence of supporting herbarium material; of the remaining taxa, 207 have been recorded during the past twenty years, one has not been seen since 1930, and eleven have not been seen for at least sixty-five years (of which five are almost certainly extinct).

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